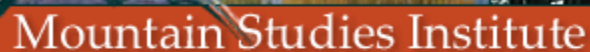


MERCURY ACTIVITY UPDATE - SW COLORADO

- Air Quality Forum
- Mercury Advisory Committee
 - Mercury Studies
- Mercury Regulatory Policy

Koren Nydick
Mountain Studies Institute



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Mini-Grant Program
Research Support: Facilities, Infrastructure
Education Programming for Visiting Class
Mountain Studies Minor at Fort Lewis Co
Seminars, Workshops, Field Trips
Conferences and Meetings
Opportunities at MSI, FLC and Beyond.



Hosting Services

Membership

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(12/2/2007)



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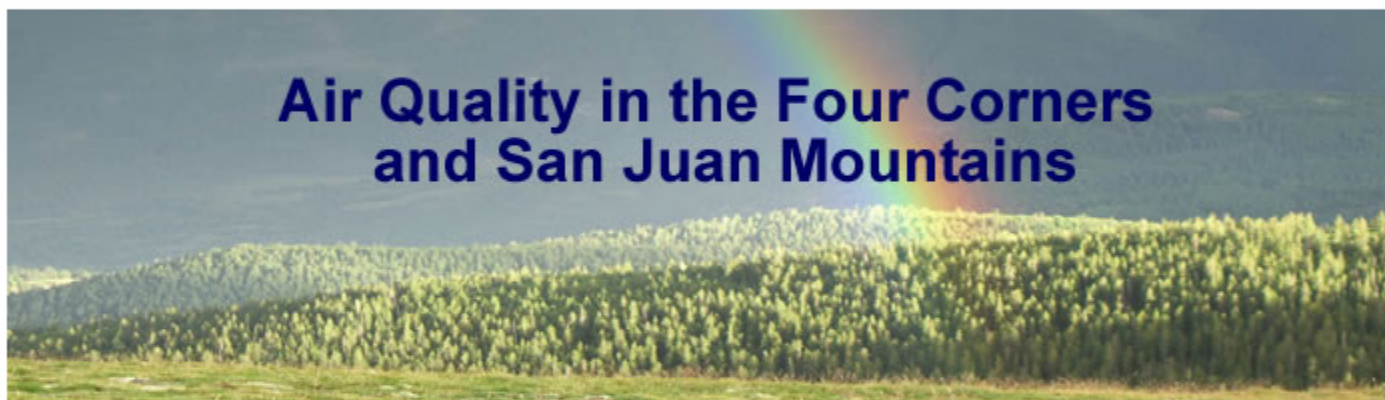


Mountain Studies Institute

SAN JUAN MOUNTAINS, COLORADO

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Air Quality in the Four Corners and San Juan Mountains



The San Juan Mountains are perceived as having crystal clean air due to the remoteness from large cities. These mountains are in close proximity to an industrialized area, however. The Four Corners is a center for coal-fired energy and methane (natural gas) production. For example, San Juan County in northwestern New Mexico is one of the largest emitters of power plant mercury among all counties in the nation. An additional coal-fired power plant and about 12,000 more natural gas wells are proposed for the Four Corners. Concerns about mercury, ground-level ozone, nitrogen and other pollutants and their effects on human health, visibility, and ecosystems are growing. Mercury concentrations in precipitation are alarmingly high and several water bodies in the region have fish consumption advisories due to mercury. Ozone levels are approaching the limit for public health considerations. Nitrogen concentrations in gaseous NO_x and in precipitation are increasing. MSI has begun to address these concerns with a combination of research, monitoring, outreach, and collaboration.

- [Mercury Study - Preliminary Results](#) (PDF)
- [Air Quality Forum \(May 29, 2008\)](#)
- [Mercury Advisory Committee Survey](#) (DOC)
- [How to get involved / Helpful Links](#)
- [Thanks to our Funders!](#)
- **How's the Air Over Here? Air Quality Information for the Four Corners Region** – coming soon.

SAN JUAN AIR QUALITY FORUM

- Goal is to increase participation, education and collaboration
- May 29, 2008 in Durango
- Support from EPA Air Toxics Grant, San Juan Public Lands Center, and Fort Lewis College (facilities)
- 59 participants (concerned citizens, local government, state and tribal agencies, federal scientists, non-profits and industry)
- Presentations etc. available on MSI website
- 2009 Plans - possible 2 day event

Day 1: Air Quality 101

Day 2: Air Quality Forum

- Aim to further increase participation, including State of Colorado & Local Public Health Agencies
- Could it take on the role of the annual meeting of the 4CAQTF??

Air Quality Forum for the Four Corners & San Juan Mountains

Thursday, May 29, 2008 - 8:30 am to 4:30 pm

Fort Lewis College, College Union Building Ballroom, Durango, CO

The Forum was organized by the Mountain Studies Institute to increase understanding and communication regarding pressing air quality issues. Over 40 participants attended, including concerned citizens, local government, state and tribal agencies, federal scientists, and industry. The Forum was funded by a grant from U.S. EPA Region 8 and cooperative funding from San Juan Public Lands (USFS/BLM). Fort Lewis College provided the facility free of charge. We hope to make this an annual event.

The big news was the likelihood that NW New Mexico (and possibly SW Colorado) will become non-attainment areas for ozone under the new federal standard. Mercury also was a big issue as data suggest that the Four Corners may be a hotspot for mercury emissions and deposition. While mercury is a pressing issue, regulation of mercury emissions from coal-fired power plants continues to be a challenge to policymakers. The Clean Mercury Rule was vacated on a federal level because it was not stringent enough and no other regulation has yet replaced it. The State of NM has decided to enforce it, however. Other topics discussed in the Forum include visibility and nitrogen deposition.

[Participant List](#) (PDF)

[Durango Herald Article about the Air Quality Forum](#) (PDF)

Air Quality Forum Agenda and Presentations

Click on the presentations below to view a pdf.

8:30-8:55 Check-in and continental breakfast buffet

8:55-9:00 [Welcome](#) (PDF)(Koren Nydick, Mountain Studies Institute)

Air Quality Planning and Management

9:00-9:15 [Air Quality Overview & the Four Corners Air Quality Task Force](#) (PDF) (Mary Uhl, NMED)

9:15-9:40 [Air Quality Jurisdictions in the Four Corners](#) (PDF) (James Temte, SUIT)

Ozone, aerosols, particulates and visibility

9:40-10:10 [New ozone standards and effect of climate programs on air quality](#) (PDF) (Patrick Cummins, Western Regional Air Partnership)

10:10-10:40 [Ozone in Colorado](#) (PDF) (Gordon Pierce, CDPHE, presented by Mark Sather)

[Ozone, NOx, and ammonia trends in NM](#) (PPT) (Mark Sather, US EPA - Reg 6)

10:50-11:15 [Visibility, aerosols and particulates](#) (PDF) (Bud Rolofson, USES - Reg 2, presented by

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Atmospheric Deposition

11:15-11:40 [Nitrogen Deposition](#) (PDF) (Ellen Porter, National Park Service)
11:40-11:55 [Mercury in New Mexico](#) (PDF) (Mary Uhl, NMED)
11:55-12:30 [Mercury in SW Colorado](#) (PDF) (Koren Nydick, MSI and Win Wright, Pine River Watershed Group)

12:30-1:30 Deli-style lunch buffet

Planning Discussion

1:30-2:00 Brief introductions
2:00-2:45 Breakout groups (6) -
Group leaders - 1) Wally White (La Plata County Commission), 2) Mike Meschke (San Juan Basin Public Health), 3) James Temte (SUIT), 4) Mark Pearson (San Juan Citizen's Alliance), 5) Mary Uhl (NMED), plus one
Questions for groups -

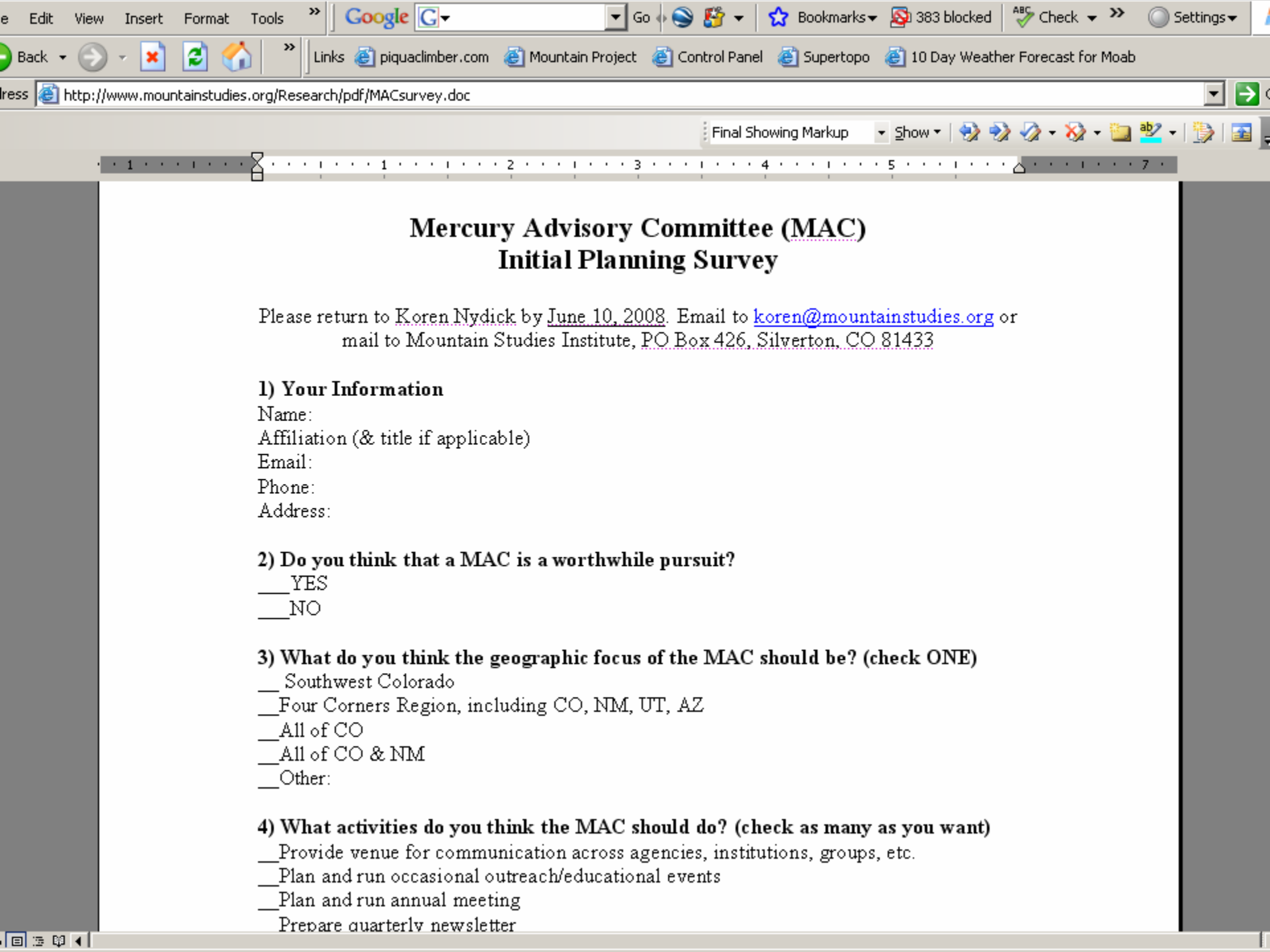
- What are the priority air quality issues?
- What is your organization/agency/etc. doing in terms of air quality? (special studies, long-term monitoring, mitigation, education, etc.)
- What would you like to see happen? What are the goals?
- What are the main obstacles?
- How can we move forward strategically and collaboratively?

2:45-3:45 Groups report out (10 min each max)
[Unedited notes from breakout groups](#)
3:45-4:30 Large group discussion/where to go from here...

MERCURY ADVISORY COMMITTEE (MAC)

Proposed to:

- Continue the work of the Task Force related to mercury.
- Collaboratively and strategically plan for and implement special studies, long-term monitoring, mitigation activities, and educational outreach.
- In this manner, the efforts of different groups and agencies will be coordinated and not overlap unnecessarily.
- *Please fill out a survey today!*



Mercury Advisory Committee (MAC) Initial Planning Survey

Please return to [Koren Nydick](#) by [June 10, 2008](#). Email to koren@mountainstudies.org or
mail to Mountain Studies Institute, PO Box 426, Silverton, CO 81433

1) Your Information

Name:

Affiliation (& title if applicable)

Email:

Phone:

Address:

2) Do you think that a MAC is a worthwhile pursuit?

☐ YES

☐ NO

3) What do you think the geographic focus of the MAC should be? (check ONE)

☐ Southwest Colorado

☐ Four Corners Region, including CO, NM, UT, AZ

☐ All of CO

☐ All of CO & NM

☐ Other:

4) What activities do you think the MAC should do? (check as many as you want)

☐ Provide venue for communication across agencies, institutions, groups, etc.

☐ Plan and run occasional outreach/educational events

☐ Plan and run annual meeting

☐ Prepare quarterly newsletter

MERCURY STUDIES

Mountain Studies Institute – ongoing

2007

- Bulk deposition measured at Molas Pass near Silverton, CO
- Mercury in lake zooplankton - 2007 synoptic survey of 28 lakes
- Mercury in lakes sediments (4 lake cores analyzed so far)
- 2007 preliminary results report and presentation on MSI website

2008

- Continue bulk deposition sampler until *USFS begins to operate a long-term “Mercury Deposition Network” sampler on Molas Pass starting October 08*
- Continue zooplankton mercury monitoring – focus on 15 lakes but samples twice over summer
- Sediment cores of Vallecito Reservoir
- Pilot study – effect of fire on mercury in Vallecito area
- Partnership with CU Boulder
- Received funding from SUIT Gaming Grant for MSI to work with SUIT intern & Pine River Watershed Group with focus on Vallecito (looking for intern for 2009!)

MERCURY STUDIES II

Pine River Watershed Group –

- Event sampler for 2007 summer wet deposition at Vallecito Reservoir
- Back trajectory modeling (estimate source of the storm)
- Some analysis of mercury in Vallecito Reservoir water & watershed inputs
- Presented results at Air Quality Forum & La Plata County Commissioners

Human Hair Study –

- Hair samples of women of child-bearing age
- Dr. Richard Grossman

Mesa Verde National Park –

- “Mercury Deposition Network” Long-Term Wet Deposition Sampler

State of Colorado –

- Testing of game fish in selected water bodies (fish tissue study – mercury fish consumption advisories)

MERCURY STUDIES III

Future Studies

Sources of Mercury Deposition for Mesa Verde National Park

- Funded by NPS for 2009-2010
- Collaboration of MSI, Win Wright, and Mesa Verde NP
- Analysis of existing deposition and meteorological data to estimate source of mercury in wet deposition.

Ecological Effect of Mercury Deposition on Mesa Verde National Park

- Funded by NPS for 2009
- Collaboration of MSI & Mesa Verde NP, possibly others
- Pilot study to investigate bioaccumulation of mercury in select wildlife species

MERCURY POLICY

No federal policy yet but...

Colorado's Electric Utility Mercury Reduction Rule

- Adopted February 2007
- Public Hearing on Sept. 18, 2008 about monitoring, record keeping and reporting requirements of the Rule
- Under the agreement, two of the largest units will reduce emissions 80 percent by 2012, while the remaining 23 units have until 2014 to reach the 80 percent reductions target. Ultimately, coal-fired power plants in Colorado must cut their mercury emissions 90 percent by 2018.

A very positive step toward protecting the quality of our air, but collaboration, education, and research/monitoring are still critical.

**THANKS TO:
4CAQTF,
AQ FORUM PARTICIPANTS,
& MSI'S AIR QUALITY FUNDERS!**

Major Funders:

U.S. EPA Region 8 – Regional Geographic Priorities Air Toxics Grant
San Juan Public Lands Center (USFS/BLM)

Additional Supporters:

Grand Mesa, Uncompahgre, and Gunnison National Forest
San Miguel County, Colorado
Telluride Institute
Fort Lewis College (facilities)